

REMARKS

The Examiner has rejected claims 1-4 under 35 USC 112 as being indefinite.

The phrase "in the configuration of a box" in Claim 1 is indefinite because it is unclear whether the beverage carrier is a box or not. For purposes of examination, the beverage carrier will be assumed to be a box. The prior patents from which the present application is based on used the term "in the configuration of a box" in the claims. A beverage carrier such as a six pack or 12 pack for holding cans is in the configuration of a box.

The phrase "composed of" in claim 1 is indefinite because it is unclear whether the term is intended to be open or closed. The phrase is assumed to mean "comprising". Applicant has amended the claim accordingly. A clean copy of the claims is enclosed herewith.

The phrases "base layer" and "based layer" in claim 1 are indefinite as their meanings are unclear. The phrases will be assumed to mean "layer". Applicant has amended the claim accordingly.

The phrase "outer surface layer" in claim 1 is indefinite as it differs from the previously used phrase "outer surface" and therefore has not been defined. The meaning of the phrase is therefore unclear. The phrase will be assumed to mean "outer surface". Applicant has amended the claim accordingly.

The phrase "being bonded continuously" is indefinite, as it is unclear how continuous the bonding is. The phrase will be assumed to mean continuous bonding over any length. The prior patents from which the present application is based on used the term "being bonded continuously" in the claims.

The Examiner has rejected claims 1-4 as being obvious over Merdem 5,057,359 in view of Massouda, 5,116,649. With regard to claim 1, the Examiner states that Merdem discloses a laminated beverage carrier (container for fruit juice; col. 3 lines 16-40) comprising a box (carton: col. 3 lines 16-40) comprising a folded, secured composite sheet (laminated; col. 3 lines 16-40); the sheet comprises a layer of unbleached paperboard (therefore a layer of unbleached cellulosic fibers: Col. 3 lines 16-57) having an inner surface and outer surface (paperboard; col. 3 lines 16-40) an outer layer of grease proof paper (therefore a separately formed paper having an inner surface and outer surface; Col. 3 lines 16-40), and adhesive between the inner surface of the outer layer and the outer surface of the inner layer, and serving to bond the outer layer to the inner layer (the adhesive comprises polyolefin layers; col. 3 lines 16-40); polyolefin layers are also laminated to the inner surface of the inner layer and the outer surface of the outer layer (Col. 3 lines 49-67). With regard to the claimed aspect of the paper layers being "uncorrugated". Merdem does not disclose corrugation; the claimed aspect of the paper layers being "uncorrugated", therefore reads on Merdem. Merdem fails to disclose a layer having printed graphics disposed on its outer surface.

Claim 1 relates to a laminated beverage carrier comprising a laminated composite sheet folded and secured in the configuration of a box. The sheet comprises a non-corrugated base layer of unbleached cellulosic fibers and having an inner surface and an outer surface. A outer layer of separately formed non-corrugated paper has an inner surface and an outer surface. Printed graphics is disposed on the outer surface of the outer layer. An adhesive is disposed between the inner surface of the outer layer and the outer surface of the base layer which serves to bond the outer layer to the base

layer. The inner surface of the outer layer is bonded continuously to the outer surface of the base layer.

Merdem does not teach a laminated beverage carrier. As stated by the present invention a beverage carrier is a carrier which holds beverage containers, such as beverage cans. Merdem is a beverage container which holds fruit juice, not beverage cans. Merdem does not teach that the outer layer is a non-corrugated paper layer.

Merdem teaches that the layers going from inside out are an adhesive layer, a greaseproof paper, a polyolefin layer, a base layer and a further adhesive layer.

Merdem does not teach that there are printed graphics disposed on the outer surface of the paper. The adhesive layers may have dye pigments which provide impermeability to light. Therefore printing on the paper would not be seen from the outside of the adhesive.

Merdem relates to a carton blank, especially for use for containers for food products composed to provide maximum safety against leakage from the container, and to safeguard against gas passage through the container wall. The carton blank is built up as a laminate of paperboard (1), and paper(2), of the greaseproof kind, an adhesive layer, such as polyolefin layer (3) being used, and said basic member (1, 2, 3) is on both sides provided with external layers (4,5) of polyolefin. **The adhesive layers (3,4,5) may additionally, have dye pigments added to provide impermeability to light. (Abstract).**

A carton blank is based on a paperboard which is laminated with a greaseproof paper, i.e., a paper of the sandwich paper or parchment paper kind, the lamination or adhesion between said two layers being provided by a gluing layer, for instance

polyolefins or equivalent components. **In manufacturing a container the paperboard surface should face outwards with the greaseproof paper facing inwards** (Col. 2, lines 16-19). Both external surfaces are coated with an adhesive layer, such as a polyolefin layer.

The grease proof paper has good barrier qualities against fat, and is also used, e.g., as an insert in cartons for biscuits and the like (Col. 2, lines 66-68).

A carton blank intended for use in production of **containers for fruit juice** is based on a basic member built up from paperboard 1, which is laminated by the aid of a polyolefin layer 3, with a greaseproof paper 2. **Said basic member comprising said three layers 1, 2, and 3, is on the surface which is intended to form the outer face of the container coated with a polyethylene layer 4.** On the inner surface a polyethylene layer 5 is laminated. **The polyethylene coatings may have dye pigment added.** The greaseproof paper is manufactured from sulphate cellulose (Col. 3, lines 16-36).

The invention relates to a carton blank having a build up in the form of a laminate consisting of a combination of paperboard and greaseproof paper which is laminated and coated on both sides by the aid of an adhesive.

Massouda teaches that it is known in the art to **print the outer polyolefin layer** of a paperboard beverage container, for the purpose of obtaining a package having a desirable appearance. (Col. 3 lines 32-42). The Examiner states that it would therefore be obvious to have provided for printing of the outer surface in Merdem in order to obtain a package having a desirable appearance as taught by Massouda.

Massouda relates to oxygen and flavor barrier laminate for liquid packaging. A heat-sealable paperboard laminate for liquid packaging comprises paperboard sandwiched between two layers of heat-sealable low density polyethylene polymer (LDPE) and including a three-component product contact barrier layer coextruded onto the inner layer of LDPE. The barrier layer comprises ethylene vinyl alcohol polymer (EVOH/a tie layer (Plexar 177 or 175)/low density polyethylene polymer (LDPE).

The Examiner states that Col. 3 lines 32-42 teach that it is known to **print the outer polyolefin layer** of a paperboard beverage container, for the purpose of obtaining a package having a desirable appearance.

Col. 3 lines 32-42 states that "In an alternative embodiment, the three component coextruded layer is applied directly onto the flange treated inner surface of a base material comprising paperboard sandwiched between two layers of LDPE. **The outer LDPE surface may be corona treated for printing if desired.** The laminate produced in either case exhibits excellent barrier properties and meets FDA requirements for use in food contact packaging. Any commercial extrusion coating grade of LDPE is suitable for use in the present invention. Ream size is 3000 square feet."

Massouda teaches that the outer LDPE surface may be corona treated for printing if desired. In the present invention the outer layer is the layer of paper which has printed graphics disposed on it. Therefore, the combination of Merdem with Massouda does not make obvious claim 1 of the present invention.

With regard to claim 2, the Examiner states that Merdem discloses the use of unbleached Kraft paper as the material of the paperboard (Col. 3 lines 49-58); the claimed aspect of the Kraft paper comprising "unbleached virgin Kraft pulp" therefore reads on Merdem.

Claim 2 relates to the laminated beverage carrier of claim 1 wherein the cellulosic fibers are selected from unbleached virgin Kraft pulp and recycled pulp.

For the reasons stated above, the combination of Merdem with Massouda does not make obvious claim 2 of the present invention.

With regards to claim 3, the Examiner states that the beverage carrier further comprises a layer of water absorbant material (air) disposed on the inner surface of the inner layer.

Claim 3 relates to the laminated beverage carrier of claim 1 further comprising a layer of water absorbent material disposed on the inner surface of the base layer.

For the reasons stated above, Merdem in view of Massouda does not make obvious claim 3 of the present invention. Merdem teaches an adhesive as the inner layer of their container. There is no water absorbent material taught by either Merdem nor Massouda.

With regard to claim 4, the Examiner states that the beverage carrier comprises a film of water resistant adhesive (the inner most polyolefin layer) bonding the absorbant material to the base layer.

Claim 4 relates to the laminated beverage carrier of claim 3 further comprising a film of water resistant adhesive bonding the absorbent material to the base layer.

For the reasons stated above, Merdem in view of Massouda does not make obvious claim 4 of the present invention. Further since neither Massouda nor Merdem teach an absorbent material, there can not be taught a water resistant material bonding the absorbent layer to the base layer.

The present invention relates to a laminated paper-board package having enhanced graphics. A sheet of clay coated or super calendered publication paper is printed with graphics, preferably by a high speed web offset printer. When producing beverage carrier, the cellulosic substrate preferably consists of one or more plies of unbleached virgin Kraft pulp, while when producing a product such as a cereal box, the cellulosic substrate can be formed of one or more plies of recycled fibers. At the box manufacturing site, the printed paper is continuously applied to a surface of the moving cellulosic substrate and bonded to the substrate by an adhesive, which preferably takes the form of hydrolyzed starch, to provide a laminated product.


Beverage cans can be introduced into the beverage carrier in a refrigerated state. Moisture may condense on the cans, which can cause warping or disfiguration of the box. To overcome this problem, a layer of water absorbent, cellulosic material, such as Kraft paper, corrugated medium, or newsprint can be applied to the inner surface of the cellulosic substrate prior to cutting and folding of the laminated sheet. The water absorbent cellulosic layer is applied to the inner surface of the substrate through use of a water resistant adhesive. The water absorbent layer will absorb any moisture which may condense on the cans. A water resistant adhesive can take the form of an epoxy resin, urea formaldehyde resin or the like.

A layer or film of water resistant material, such as polyethylene film, can be applied to the inner face of the cellulosic substrate prior to cutting and folding of the laminated material.

The invention provides enhanced graphics for paperboard packaging by use of high speed printing on publication paper, which is then bonded to the cellulosic substrate through an adhesive which preferably takes the form of hydrolyzed starch.

Applicant believes that the application is now in condition for allowance.

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WHAT IS CLAIMED IS:

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C1
B1

1. A laminated beverage carrier comprising a laminated composite sheet folded and secured in the configuration of a box, said sheet comprising a non-corrugated base layer of unbleached cellulosic fibers and having an inner surface and an outer surface, an outer layer of separately formed non-corrugated paper having an inner surface and an outer surface, printed graphics disposed on the outer surface of the outer layer, and adhesive disposed between the inner surface of the outer layer and the outer surface of the base layer and serving to bond the outer layer to said base layer, the inner surface of said outer layer being bonded continuously to the outer surface of said base layer.

2. The laminated beverage carrier of claim 1 wherein said cellulosic fibers are selected from the group consisting of unbleached virgin kraft pulp and recycled pulp.

3. The laminated beverage carrier of claim 1 further comprising a layer of water absorbent material disposed on the inner surface of said base layer.

4. The laminated beverage carrier of claim 3 further comprising a film of water resistant adhesive bonding said absorbent material to said base layer.

5. In a method of producing a laminated package, the steps comprising producing a base layer of cellulosic fibers, producing a sheet of paper having a smooth printable first surface, printing graphics on the smooth printable first surface of said paper sheet, continually moving the base layer in a path of travel, continuously applying the printed sheet to a first surface of said

moving base layer, while applying adhesive between contiguous surfaces of said base layer and said printed paper sheet to bond the printed paper to said moving base layer and produce a laminated structure with said printed paper sheet being bonded to substantially the entire surface area of the base layer.

6. The method of claim 5 wherein said laminated package is a beverage carrier.